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with a crest'), the Greek name for the crested lark, transferred to *Fumaria bulbosa*, L. (*Corydalis cava*, Schweigg.), from a fancied resemblance of its flower to the crest of that bird. Hence also one of the Ger. names for the same plant, *lerchenhelm*.

ALYSSUM.—"Gr. *α*, privative, *λὺσσα* 'rage;' supposed by the ancients to allay anger." (Wood.) "Gr. *ἀλύσσω*, 'to be mad,' from its being supposed to cure mental maladies." (Eaton.) "Greek name of a plant reputed to check the hiccups, as the etymology [*α*, privative, and *λύζω*] denotes." (Gray.) At least two plants were anciently called *ἄλυσσον*. That of Dioscorides has been identified as *Farsetia clypeata*, R. Br., and that of Galen as *Marrubium Alyssum*, L. The plant mentioned by Galen is said by him to have been so called from its being good for the bite of a mad dog, and the same properties are assigned by Dioscorides to the *Marrubium*.

VINCETOXICUM.—The root of *Vincetoxicum officinale*, the plant to which this name was originally applied, was once held in some repute in Germany as an antidote to poison, and was known to materia medica as *Contrayerva Germanorum*. Hence the popular and Lat. names: Eng. *tame-poison*, Fr. *dompte-venin*, Ger. *widergift*, and Lat. *vincetoxicum* (from *vincere* and *toxicum*).

LYTHRUM.—From Gr. *λύθρον*, 'clotted blood;' not, as usually stated, in all botanical works, from the color of the flowers, but from the original species (*Lythrum Salicaria*, L.) having, on account of his astringency, been used to arrest hemorrhages.

Use of Spines in Cactuses.—Our brethren across the water, assuming that thorns are simply for protection in a military sense, are exercising themselves in their serials over the spiny leaves of the holly. When young and vigorous, *i. e.*, in early life, the teeth are very spiny; when the tree is aged and the branches then a distance above the surface of the ground, losing vigor, the spines are weak or absent. Sir John Lubbock and others, following the poet Southey, see in this a beautiful adaptation for protective purposes. When within the reach of animals, spines are borne, when high up where animals cannot reach, spines are unnecessary. Numbers of species of plants have mucronate points to the leafy serrature, which are wanting in maturer years. It is at any rate difficult to imagine why a sharp point should be made especially for protection, and points less sharp for no protective use at all.

I have often reflected on the fact referred to by Dr. Newberry, that our thorniest plants are in much greater proportion in places where animal life is scarce, and the immense police force sustained by the great vegetable community absolutely thrown away. Cactuses and other thorny things I have seen covered with thorns and spines on deserts where the hot air seemed to be bounding up and down like the surging ocean, and where not even a lizard could have dared to show its face. Thorns cannot be, so I have thought, for protection where the climate gives all the protection desired. I am not one who doubts that nature has a purpose in every move she makes, but the main purposes I think we seldom reach, and that we do ourselves an injury in research by assuming mere incidental uses as the main purposes for which structures seem to be "adapted."

One of these uses in the spines of cactus has occurred to me after reading Dr. Newberry's remarks on *Pinus edulis* in the last number. They break the full force of the sun on the plant, a force it is made to endure and not to love, as we know who have learned to cultivate it. Plant lovers set out their treasures in summer under "arbors" of fish-netting or galvanized wire, and those who have no experience would be surprised to find how the moving shadows of the twine or wire lowers the temperature. A mass of spines on a cactus must certainly have the same effect. A cactus does not need much light on its epiderm to keep healthy. On the dry mesas along the Uncompahgre River I have seen some aggregated masses of *Echinocactus phœniceus* forming dense hemispheres a foot high and as much wide, with spines so thoroughly interlaced with spines as to rival the hedgehog, and leaving not a particle of the green surface visible; and there are species not cæspitose, such as *E. pectinatus*, which no one can see for spines without cutting apart, and forming a complete protection from the hot suns under which they are doomed to live.

I do not suppose I have yet reached the final purpose of spines in a cactus any more than we have the final purpose in the existence of the cactus itself, but that one use of cactus spines is to furnish a partial shade I feel to be beyond a doubt.

Thomas Meehan.

Gyalecta lamprospora, Nyl.—In a recent number of the *Regensburg Flora*, Dr. Nylander, of Paris, has described a lichen sent him by me as follows: "Thallus white, opaque, thin; apothecia becoming black, superficial,opaque, subrugulose, about $0.5^{\mathrm{mm.}}$ or less in diameter; spores 8, without color, narrowly oblong, muriform-divided 0.100–$110^{\mathrm{mm.}}$ long, 0.010– 11 broad, in the middle somewhat constricted, paraphyses slender, the epithecium, with the perithecium and the lower stratum of the hypothecium, dark colored. Reaction with iodine fulvous red. On unknown exotic bark. A marked species of a distinct type. Thallus not corticate, all its elements, with the conceptacle of the apothecia, fulvous red; the scanty and confusedly cellular portion reacting similarly. Gonidia mostly chroolepid, connected, medium-sized and emitting lichenose hyphoid filaments. Younger apothecia obtusely margined, with an impressed disk. Thekes pyriform, long stipitate below, spermatia bowed, about $0.018^{\mathrm{mm.}}$ long."

To this description Dr. Nylander adds: "We have distinctly seen each gonidium, and even young gonidia, of this lichen emit from its walls one and even two filaments, characteristically lichenose. It is perfectly evident that these productions are lichenose, and continuations of the wall of the gonidium. What then becomes of 'symbiosis'? for where is here the 'fungus' and where the 'alga'? In the lichen there exist only lichenose elements, as is everywhere demonstrated."

This lichen was sent me by Dr. J. W. Eckfeldt as having been collected near Philadelphia, without further indication. But the